

## KNOWLEDGE AND PRACTICE REGARDING FOOT CARE AMONG PATIENTS WITH TYPE 2 DIABETES MELLITUS

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### ABSTRACT

*Diabetes is a chronic illness associated with higher rates of morbidity and mortality. Much of the care plan for this disease is interwoven with the daily life behaviors, thus diabetic individuals are responsible for control and management of disease. Objective of this paper is to assess the knowledge and practice regarding foot care and prevalence of foot problems among patient with type 2 Diabetic Mellitus. Methodology: 120 patients with type II diabetes mellitus aged between 20- 60 years of age were included in the study. Structured interview schedules and inflows 60-second Diabetic foot screen checklist were used for data collection. Results and Discussion: 9% of people are recommended for foot screening every 6 months. 77% of patients had inadequate knowledge regarding diabetic foot care. 22% of patients had inadequate knowledge regarding diabetic foot care. Mean knowledge score was 30.075 & standard deviation 5.461. Mean practice score was 10.775 and standard deviation was 3.265. Assessment of practice shows 64% of patients had poor diabetic foot care practice. There is a low correlation between knowledge and practice. There was a statistically significant association found between knowledge and practice with the selected demographic variables of patient with type 2 Diabetic Mellitus. Conclusion: The study suggests that patients with type2 diabetes mellitus need to be educated about foot care and regular checkups must be emphasized.*

**KEYWORDS:** Type 2 Diabetic Mellitus, Foot Care, Knowledge & Practice

**Received:** Nov 24, 2017; **Accepted:** Dec 14, 2017; **Published:** Jan 05, 2018; **Paper Id.:** IJMPSFEB20186

### INTRODUCTION

Diabetes mellitus is chronic illness associated with higher rates of morbidity and mortality. Effective diabetes management requires changes in important aspects of each patient daily routine. There are many complications of diabetes mellitus, one of the complications is foot problems. Due to illiteracy and lack of awareness, people cannot take care of their foot which can lead to amputation also. Ahead of world health day, **the Lancet (2016)** study said there is a fourfold rise in the number of diabetics from 108 million in 1980 to 422 million in 2014 and half of them live in India, China, Brazil and Indonesia. According to **International Diabetes Federation Atlas (IDF) 2015**, an estimated 69.2 million Indians are diabetic; as per the WHO assessment stood at 64.5 million in the year 2014. The estimates depict that diabetics prevalence has alarmingly doubled and so far has grown by over 100% in the past 15 years. It is further estimated that 35% to 40% have already shown some complications of the disease at the time of diagnosis by (IJMR) Indian Journal of medical research (2011). The **IDF (2015)** estimates that by 2030, 8.4% of India's adult population will have diabetes.

## REVIEW OF LITERATURE

A study conducted by Arulmozhi. S, Mahalakshmy. T (2014) shown that only 16.7% of diabetes mellitus patients regularly inspect their feet.

Chiwanga' FS, Njelekela, MA.(2015) in their study of 404 patients stated that 15 % had foot ulcers, 44 % had peripheral neuropathy, and 15 % had peripheral vascular disease. The mean knowledge score was  $11.2 \pm 6.4$  out of a total possible score of 23. Low mean scores were associated with a lack of formal education ( $8.3 \pm 6.1$ ), diabetes duration of  $< 5$  years ( $10.2 \pm 6.7$ ) and not receiving advice on foot care ( $8.0 \pm 6.1$ ). Among the 404 patients, 48 % had received advice on foot care, and 27.5 % had their feet examined by a doctor at least once since their initial diagnosis. Foot self-care was significantly higher in patients who had received advice on foot care and in those whose feet had been examined by a doctor at least once.

George H, Rakesh P S, Krishna M. et al., (2013) found in their study, About 75% had a good knowledge score and 67% had good foot care practice score. Male gender (OR 2.36, 95% CI 1.16-4.79), poor education status (OR 2.40, 95% CI 1.19-4.28), and lesser duration of diabetes (OR 2.24, 95% CI 1.15-4.41) were significantly associated with poor knowledge on foot care. Poor knowledge was associated with poor foot care practices (OR 3.43, 95% CI 1.75-6.72). The prevalence of neuropathy was 47% (95% CI 40.14-53.85) and it was associated with longer duration of the disease (OR 2.18, 95% CI 1.18-4.04).

Pinakin K. Sutariya, Ashish Kharadi. (2016) found in their study that only 24(23%) patients had good knowledge, 51 (50%) patients had satisfactory knowledge and 28(27%) had poor knowledge about diabetic foot care. Majority of the patients, i.e., 53 (51%) had poor practice, 34 (33%) had a satisfactory practice and 16 (15%) had a good practice. Duration of the diabetes and frequency of diabetic foot had a significant statistical association with knowledge and practices of foot care.

### Statement of the Problem

A study to assess the knowledge and practice regarding foot care and foot problems among patient with type 2 Diabetic Mellitus

### Objectives

To determine the knowledge and practice of foot care and foot problems among patients with type 2 Diabetes Mellitus.

To correlate knowledge and practice of foot care among patients with type 2 Diabetes Mellitus.

To associate the level of knowledge and practice of patients with type 2 Diabetes Mellitus with their selected demographic variables.

### Research Hypothesis

H<sub>1</sub>- There is a significant association between the knowledge and practice patients with type 2 Diabetes Mellitus with their selected demographic variables.

### Methodology

In this study, quantitative research approach and descriptive research design were adopted.

**Population:** The population of the present study constitutes all diabetic patients of kanchipuram district.

**Samples:** Samples were selected by using non probability convenient sampling technique. 120 samples who fulfilled sample selection criteria were selected.

**Tools Used:** Structured knowledge questionnaire, practice checklist and 60 seconds foot screen checklist were used to collect the data.

**Data Collection Methods:** Interview method assessed the knowledge, practice regarding foot care and observation checklist was used to assess the prevalence of foot problem among type II diabetes mellitus patients. Throughout the process of data collection are ensured the privacy, dignity, religious and cultural belief and ethical aspects are respected.

Collected data were analyzed and interpreted according to the objectives by using descriptive and inferential statistics.

## RESULTS AND DISCUSSIONS

Assessment of demographic variables of patients with diabetes mellitus shown that 61 (51%) of patients were in the age group of (51-60), 72 (60%) of patients were females, 55(46%) of patients were illiterate, 66 (51%) of samples has no history of habits, 51(42%) of samples have hypertension, 42(35%) of patients had a family history of diabetes mellitus, 56(47%) of patients have diabetes mellitus <5 years.

**Table 1: Frequency and Percentage Distribution of Foot Problems of Patients with Diabetes Mellitus**

Parameters	Frequency	Percentage
Self care deficit	17	14%
Callus formation	10	8.33%
Infected ulcer	2	1.66%
Infected nails	6	5%
Peripheral arterial Disease	7	5.83%
Neuropathy	3	2.5%
Charcot changes	5	4.16%

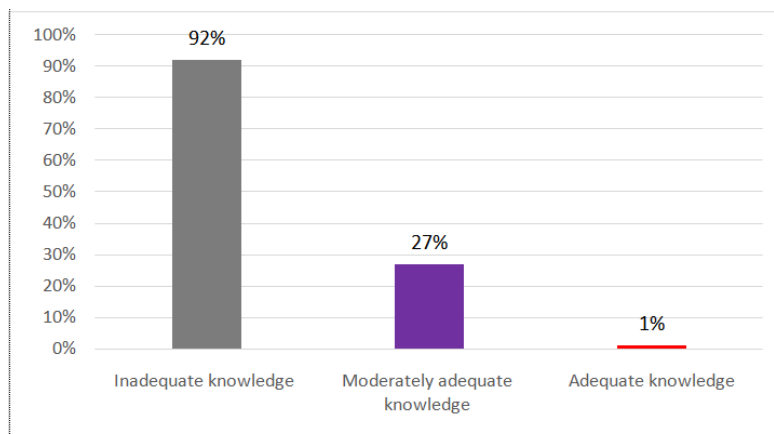
Assessment of foot problems **Table-1** revealed that 8.33% of diabetic patients had callus formation, 5.83% of diabetic patients had peripheral arterial disease, 1.66% of diabetic patients had an infected foot ulcer, 4.16 % of diabetic patients had charcot changes.

**Table 2: Mean Range and Standard Deviation of Knowledge Scores of Patient with Diabetes Foot Care**

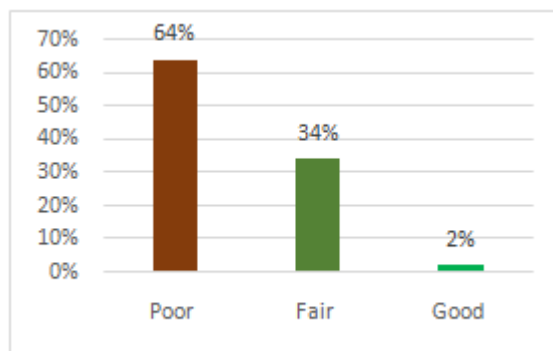
Categories	Mean	Range	Standard deviation
Knowledge	30.075	6 - 51	5.461
Practice	10.775	3-21	3.268

Assessment of the knowledge and practice of foot care among patients with type 2 diabetes mellitus **figure-1 and 2** shows that 77% of samples had inadequate knowledge regarding diabetic foot care. Practice score reveals that 64% of patients were poor in practicing diabetic foot care. Knowledge mean score (**Table-2**) was  $30.075 \pm 5.461$ . Regarding, mean

practice score was  $10.775 \pm 3.235$ . There was a low correlation between knowledge and practice.



**Figure 1: Percentage Distribution of Foot Care Knowledge  
Scores of Patients with Type 2 Diabetes**



**Figure 2: Percentage Distribution of Foot Care Practice  
Scores of Patients with Type 2 Diabetes**

Association of demographic variables shows that there was a statistically significant association found between knowledge and gender ( $X^2 = 268.174$ ,  $p < 0.05$ ), duration of diabetes mellitus ( $X^2 = 56.577$ ,  $p < 0.05$ ), education ( $X^2 = 36.577$ ,  $p < 0.05$ ). Practice was associated with gender ( $X^2 = 45.389$ ,  $p < 0.05$ ), education ( $X^2 = 29.31$ ,  $P < 0.05$ ), type of family ( $X^2 = 32.809$ ,  $P < 0.05$ ). So the stated research hypothesis “there is a significant association between knowledge and practice of diabetic Patients with their selected demographic variable” was accepted.

## CONCLUSIONS

This study, which was conducted to assess the knowledge and practice regarding foot care among patients with type 2 diabetes mellitus. Communication of these findings creates an awareness about the importance of foot care among diabetic patients. This study could be a baseline for future studies. Extensive research must be conducted in this area to identify the risk factors of diabetic foot.

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